

CAN MIO-E Design Reference

Revision 1.0

Reference Documents

Document	Location
RDC EIO-IS200 datasheet	

Introduction

- This document is the design reference for designing a MIOe module with CAN feature to work with Advantech MIO single board.

- Contents:
 - Function Selection Table
 - PCB Layout Considerations
 - Reference Schematic
 - Component List

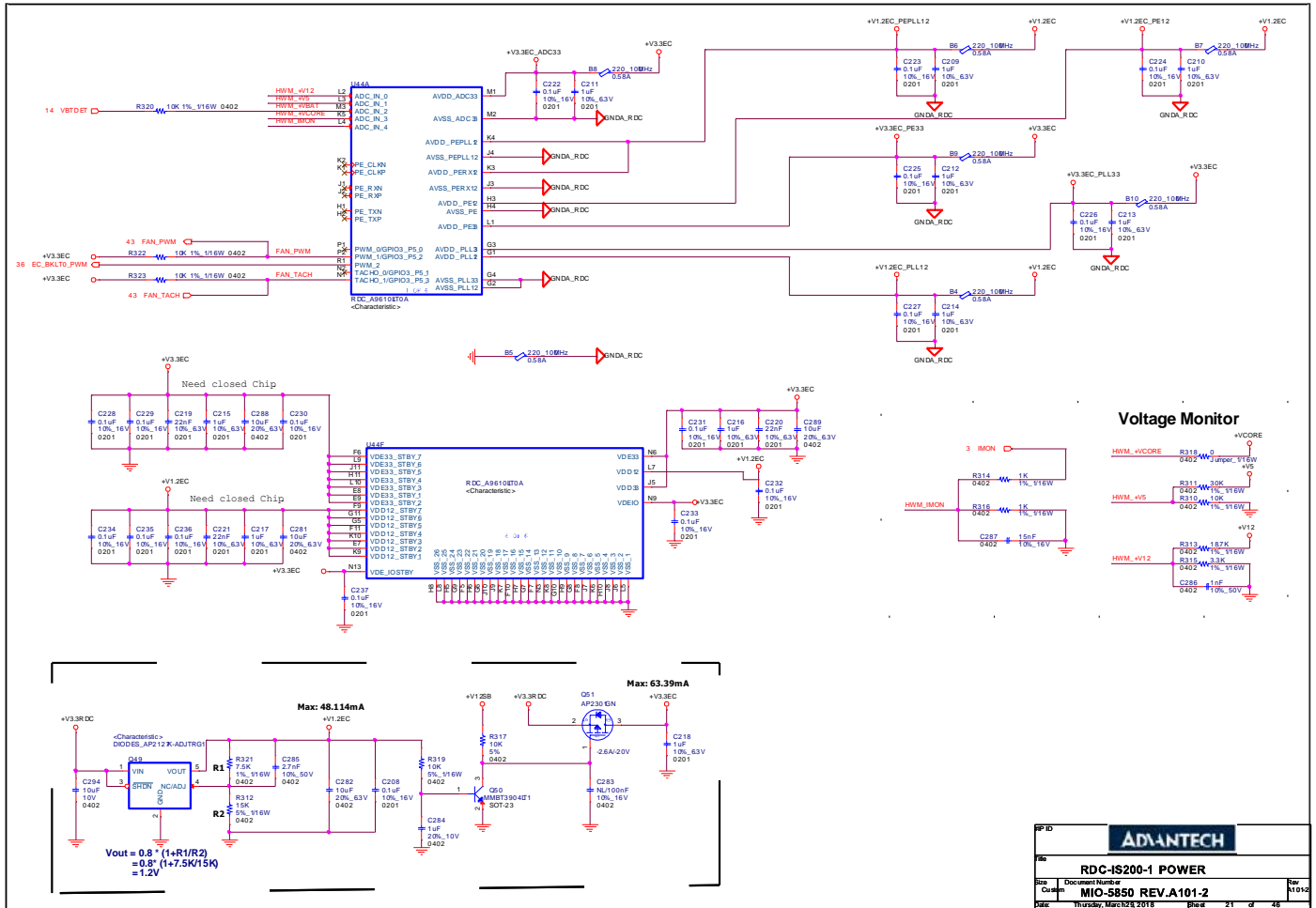
This document is only for MIOe design reference purpose only. Although the information is intended to be accurate, Advantech makes no claims, promises, or guarantees about the quality or reliability of a MIOe board that designed by any user who is outside of Advantech Corp.

FUNCTION SELECTION TABLE

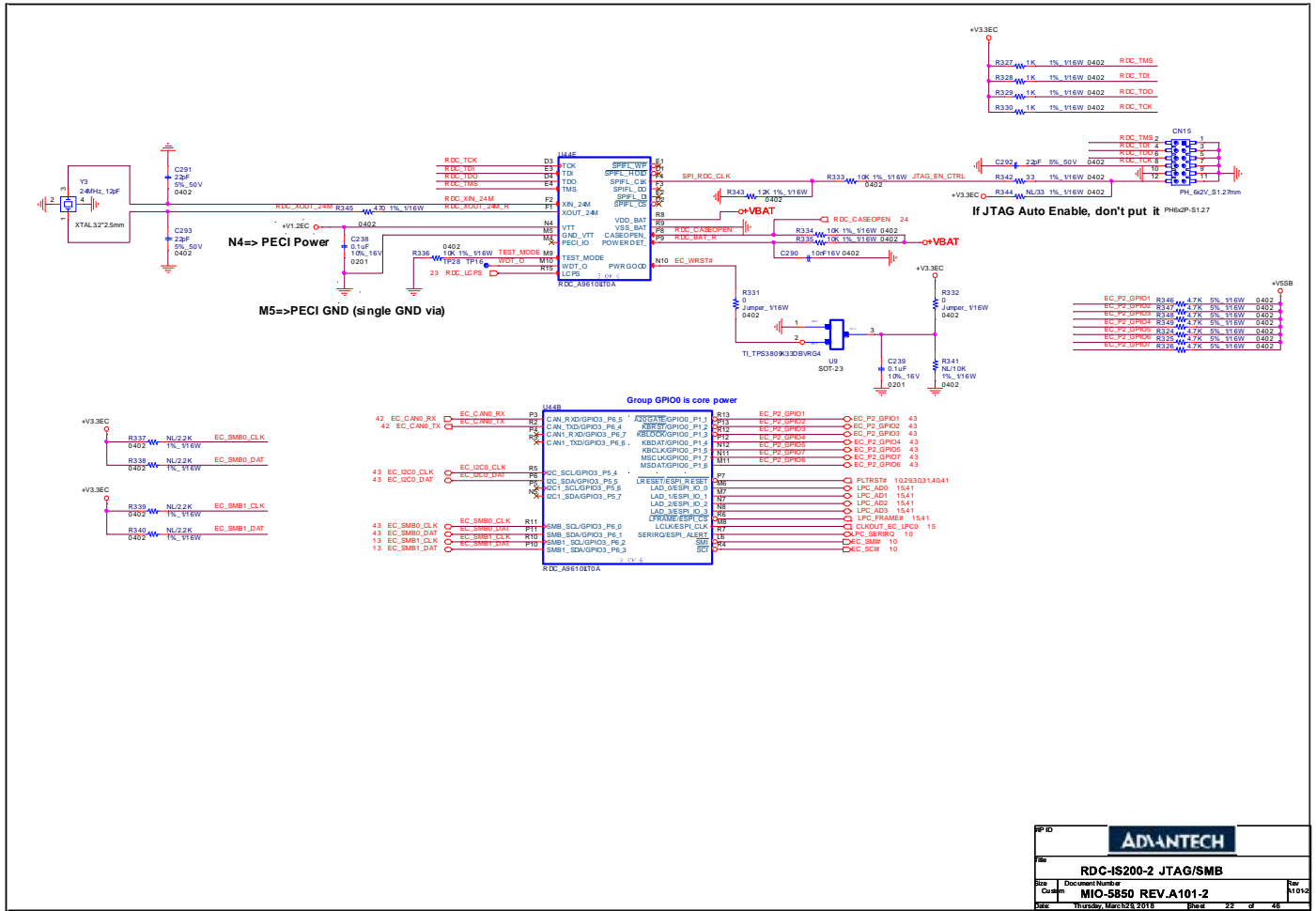
PCB Layout Considerations

Please notice that PCB Layout will be vary depends on design. For layout considerations, please refer to EIO-IS200 and MIOe Design Guide.

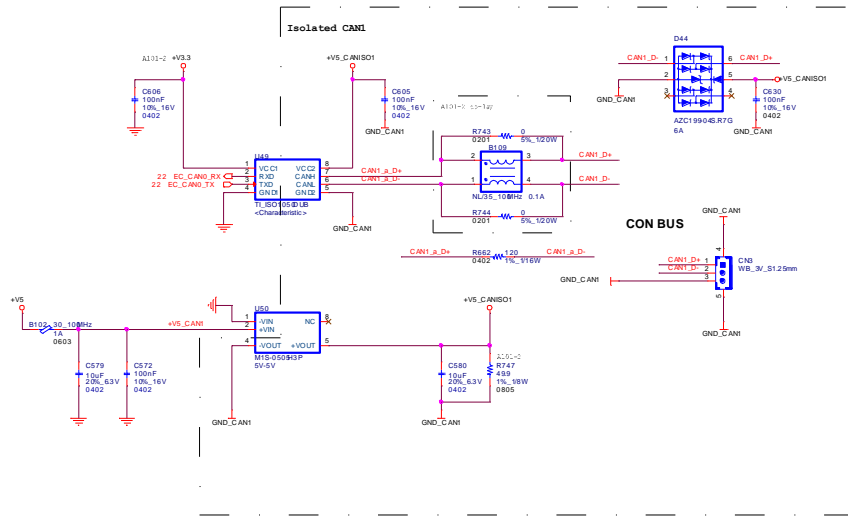
Reference Schematic



ADVANTECH	
RDC-IS200-1 POWER	
Doc ID	Rev
Doc Name	Rev
Doc Date	Rev
MIO-5850 REV.A101-2	
Doc Date	Rev
Doc Name	Rev
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CAN Bus 1



PART		ADVANTECH	
Title: CAN Isolated			
Rev:	Docuement Number:	MIO-5850 REV.A101-2	
Date:	Created:	Tuesday, October 09, 2018	Sheet 42 of 48

Component List

QTY	Description	Reference	Manufacture Part Number	Manufacture
1	TKFR 3.3K 1% 1/16W SMD 0402	R315	0402WGF3301TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
4	CR 2.2K 1% 1/16W SMD 0402	R337	0402WGF2201TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R338		
		R339		
		R340		
1	TKFR 30K 1% 1/16W SMD 0402	R311	0402WGF3002TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	TKFR 7.5K 1% 1/16W SMD 0402	R321	0402WGF7501TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	TKFR 120 1% 1/16W SMD 0402	R662	0402WGF1200TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	TKFR 12K 1% 1/16W SMD 0402	R343	0402WGF1202TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	TKFR 18.7K 1% 1/16W SMD 0402	R313	0402WGF1872TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
2	TKFR 0 Jumper 1/20W SMD 0201	R743	RC0201JR-070RL	國巨股份有限公司 (Yageo Co.,Ltd.)
		R744		
1	TKFR 49.9 1% 1/8W SMD 0805	R747	0805W8F499JT5E	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
1	MLCC X5R 1uF 10% 10V SMD 0402	C284	0402X105K100CT	華新科技股份有限公司 (Walsin Technology Corporation)
5	MLCC X7R 0.1uF 10% 16V SMD 0402	C283	0402B104K160CT	華新科技股份有限公司 (Walsin Technology Corporation)
		C572		
		C605		
		C606		
		C630		
1	MLCC X7R 15nF 10% 16V SMD 0402	C287	C1005X7R1C153KT	台灣東電化股份有限公司 (TDK Taiwan Corporation)
1	MLCC X7R 2700pF 10% 50V SMD 0402	C285	0402B272K500CT	華新科技股份有限公司 (Walsin Technology Corporation)

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7	MLCC X5R 10uF 20% 6.3V SMD 0402	C281	CL05A106MQ5NUNC	台灣三星電子股份有限公司 (Samsung Electronics Taiwan Co.,Ltd)
		C282		
		C288		
		C289		
		C294		
		C579		
		C580		
10	MLCC X5R 1uF 10% 6.3V SMD 0201	C209	0201X105K6R3CT	華新科技股份有限公司 (Walsin Technology Corporation)
		C210		
		C211		
		C212		
		C213		
		C214		
		C215		
		C216		
		C217		
		C218		
19	MLCC X5R 100nF 10% 16V SMD 0201	C208	0201X104K160CT	華新科技股份有限公司 (Walsin Technology Corporation)
		C222		
		C223		
		C224		
		C225		
		C226		
		C227		
		C228		
		C229		
		C230		
		C231		
		C232		
		C233		
		C234		
		C235		
		C236		
		C237		
C238				
C239				

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3	MLCC X5R 22nF 10% 6.3V SMD 0201	C219	0201X223K6R3CT	華新科技股份有限公司 (Walsin Technology Corporation)
		C220		
		C221		
1	MLCC X7R 0.01uF 10% 16V SMD 0402	C290	0402B103K160CT	華新科技股份有限公司 (Walsin Technology Corporation)
3	MLCC NPO 22pF 5% 50V SMD 0402	C291	0402N220J500CT	華新科技股份有限公司 (Walsin Technology Corporation)
		C292		
		C293		
1	MLCC X7R 1000pF 10% 50V SMD 0402	C286	0402B102K500CT	華新科技股份有限公司 (Walsin Technology Corporation)
1	Bead 30ohm 1A SMD 0603	B102	BLM18PG300SN1D	台灣村田股份有限公司 (Taiwan Murata Electronics Co., Ltd.)
1	TVS AZC199-04S.R7G 6A 6V SMD SOT23 6P	D44	AZC199-04S.R7G	晶焱科技股份有限公司 (Amazing Microeletronic Corp.)
1	MOSFET P-CH AP2301GN -2.6A -20V SMD SOT-23 3P	Q51	AP2301GN	富鼎先進電子股份有限公司 (Advanced Power Electronics Corp.)
1	TRANS NPN MMBT3904LT1G 0.2A SMD SOT-23 3P	Q50	MMBT3904LT1G	安森美半導體 (On Semiconductor)
1	WAFER 3P 1.25mm 90D(M) SMD	CN3	85205-03001	宏致電子股份有限公司 (Aces Electronic Co.,Ltd.)
9	TKFR 10K 1% 1/16W SMD 0402	R310	0402WGF1002TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R320		
		R322		
		R323		
		R333		
		R334		
		R335		
		R336		
2	TKFR 33 1% 1/16W SMD 0402	R342	0402WGF330JTCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R344		
6	TKFR 1K 1% 1/16W SMD 0402	R314	0402WGF1001TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R316		
		R327		
		R328		
		R329		
		R330		

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1	CR 470 1% 1/16W SMD 0402	R345	0402WGF4700TCE	Koanet (S)/KOA
3	TKFR 0 Jumper 1/16W SMD 0402	R318	0402WJ0000TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R331		
		R332		
2	CR 10K 5% 1/16W SMD 0402	R317	0402WJ0103TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R319		
1	TKFR 15K 5% 1/16W SMD 0402	R312	0402WJ0153TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
7	CR 4.7K 5% 1/16W SMD 0402	R324	0402WJ0472TCE	厚聲電子工業有限公司 (Uniroyal Electronics Industry Co.,Ltd.)
		R325		
		R326		
		R346		
		R347		
		R348		
		R349		
7	Bead 220ohm 25% 580mA SMD 0402	B4	BLM15AX221SN1D	台灣村田股份有限公司 (Taiwan Murata Electronics Co., Ltd.)
		B5		
		B6		
		B7		
		B8		
		B9		
		B10		
1	Bead 35ohm 0.1A SMD 4P	B109	TCM0605S-350-2P -T201	台灣東電化股份有限公司 (TDK Taiwan Corporation)
1	X'TAL 24MHz 10ppm 12pF SMD 4P 3.2X2.5X0.6mm EPSO	Y3	EPSON-TSX-3225-24M -12PF-10PPM	台灣愛普生科技股份有限公司 (Epson Taiwan Technology & Trading Ltd.)
1	Converter DC-DC 5V-5V 0.2A SMD 5P	U50	M1S-0505H3P	頻譜電子工業股份有限公司 (CTC)
1	IC TPS3809K33DBVRG4 SMD SOT-23 3P	U9	TPS3809K33DBVRG4	德州儀器工業股份有限公司 (Texas Instruments Incorporated)
1	IC A9610LIT0A SUPER IO EMBEDDED CTRL LFBGA 225P	U44	A9610LIT0A	金麗科技股份有限公司 (Rdc Semiconductor Co., Ltd.)
1	IC AP2127K-ADJTRG1 300mA 2.5-6V ADJ LDO SOT-23-5	Q49	AP2127K-ADJTRG1	Diodes Inc.
1	IC ISO1050DUB CAN transceiver isolator SOP 8P	U49	ISO1050DUB	德州儀器工業股份有限公司 (Texas Instruments Incorporated)

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1	PINH 2x6P/1.27mm/(M)/NY6T/VA/ GFL/S/BK/H1.0mm	CN15	21N21040-12M00B -01G-3-C	致威電子公司 (Jih Vei Electronics Co., Ltd.)
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Other Remarks

This document provides a reference on hardware design only. For other support or resource such as Firmware or other utilities, please contact your local agent.